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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/752,833	01/06/2004	Bryron L. Zerphy	08943.0005	6824

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EXAMINER

HSU, JONI

ART UNIT	PAPER NUMBER
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2676

DATE MAILED: 03/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/752,833

Applicant(s)

ZERPHY ET AL.

Examiner

Joni Hsu

Art Unit

2676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/2/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 3-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Banks (US005796376A).

3. With regard to Claim 1, Banks describes a display unit configured for use in a sign display panel (Col. 1, lines 8-11) comprising a central processing unit (42, Figure 3; Col. 5, lines 11-30); a display output device (26, Figure 1; Col. 3, lines 55-66); an interface (36, Figure 3) for receiving a plurality of frames and receiving a plurality of display instructions (Col. 4, lines 61-65). The interface inherently receives the plurality of frames first, then receives the plurality display instructions to process the received plurality of frames. Banks also describes a memory (44) for storing software configured for execution by the central processing unit (Col. 5, lines 31-37), wherein the software comprises instructions for storing each of the plurality of frames (Col. 5, line 58-Col. 6, line 19). Banks also describes that the instructions include sign controller commands (Col. 4, lines 61-65). The sign controller commands control the display panels (26, Figure 1; Col. 4, lines 37-42). The panel controller (58, Figure 5) is in refresh mode unless it is

acquiring data from the panel data bus (24) (Col. 7, lines 29-45), so the sign controller commands must inherently tell the panel controller when to be in refresh mode. The panel controller inherently passes on these commands to the display output device to tell the display output device when to be updated. Therefore, Banks inherently discloses that upon receipt of each of the plurality of display instructions, processing one of the frames to update the display output device.

4. With regard to Claim 3, Banks describes that the frames are stored in a first-in-first-out (FIFO) memory (50, Figure 4; Col. 5, line 58-Col. 6, line 19), and the frames are output from the FIFO to be processed (Col. 7, lines 1-28). By definition, the FIFO outputs the frames in the order the frames were received, and therefore inherently the frames are processed in order the frames were received.

5. With regard to Claim 4, Banks describes that the frames are stored in a first-in-first-out (FIFO) memory (50, Figure 4; Col. 5, line 58-Col. 6, line 19).

6. With regard to Claim 5, Banks describes that the instructions include sign controller commands (Col. 4, lines 61-65). The sign controller commands control the display panels (26, Figure 1; Col. 4, lines 37-42). The panel controller (58, Figure 5) is in refresh mode unless it is acquiring data from the panel data bus (24) (Col. 7, lines 29-45), so the sign controller commands must inherently tell the panel controller when to be in refresh mode. The panel controller inherently passes on these commands to the output drivers (Col. 6, lines 54-67) to tell

the output drivers when to update the output display device (26, Figure 1). Therefore, Banks inherently discloses that processing one of the frames comprises sending instructions to a set of output drivers to update the output display device (26, Figure 1).

7. With regard to Claim 6, Banks describes that the output display device (26, Figure 1) comprises an LED display (Col. 3, lines 4-5).

8. Thus, it reasonably appears that Banks describes or discloses every element of Claims 1 and 3-6 and therefore anticipates the claims subject.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Banks (US005796376A) in view of Trevers (US 20030206228A1).

Banks is relied upon for the teachings as discussed above relative to Claim 1.

However, Banks does not teach that each of the plurality of display instructions identifies the one frame for processing. However, Trevers describes a display unit [0001] comprising a central processing unit [0061]; a display output device [0054]; receiving a plurality of frames [0007] and a plurality of display instructions [0018]; and software comprising instructions [0232] for storing each of the plurality of frames [0018] and, upon receipt of each of the plurality of display instructions, processing one of the frames to update the display output device [0031]. Trevers describes an instruction set for setting up a new frame for display [0142, 0018], and therefore each of the plurality of display instructions must inherently identify the one frame for processing.

It would have been obvious to one of ordinary skill in this art at the time of invention by applicant to modify the device of Banks so that each of the plurality of display instructions identifies the one frame for processing as suggested by Trevers because Trevers suggests that this must be done so that the processor knows which frame to process [0142].

12. Claims 7 and 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banks (US005796376A) in view of Lavelle (US004642794A).

13. With regard to Claim 7, Banks describes a method of rapidly refreshing a sign display panel (Col. 7, lines 23-24; Col. 1, lines 8-11), the method comprising first receiving a plurality of frames (Col. 4, lines 61-65); storing each of the plurality of frames (Col. 5, line 58-Col. 6, line 19); then receiving at least one of a plurality of display instructions (Col. 4, lines 61-65). The sign controller commands control the display panels (26, Figure 1; Col. 4, lines 37-42). The panel controller (58, Figure 5) is in refresh mode unless it is acquiring data from the panel data bus (24) (Col. 7, lines 29-45), so the sign controller commands must inherently tell the panel controller when to be in refresh mode. The panel controller inherently passes on these commands to the display output device to tell the display output device when to be updated. Therefore, Banks inherently discloses processing, upon receipt of the display instruction, one of the plurality of frames to update a display output device. The plurality of frames is inherently received first, then the plurality of display instructions is received second to process the received plurality of frames.

However, Banks does not teach that the receiving is based on messages. However, Lavelle describes a method of refreshing a display (Col. 3, lines 1-25), the method comprising receiving, based on at least one of a first message, a frame; storing the frame (Col. 6, lines 39-45; Col. 8, lines 1-19). Some messages contain display commands. Therefore, Lavelle describes receiving, based on a second message, at least one of a plurality of display instructions; and processing, upon receipt of the second message, the frame to update a display output device (Col. 3, lines 10-20; Col. 6, lines 45-46).

It would have been obvious to one of ordinary skill in this art at the time of invention by applicant to modify the device of Banks so that the receiving is based on messages as suggested

by Lavelle because Lavelle suggests that messages are needed so that the processor knows what to do (Col. 6, lines 39-49).

14. With regard to Claim 9, Claim 9 is similar in scope to Claim 3, and therefore is rejected under the same rationale.

15. With regard to Claim 10, Claim 10 is similar in scope to Claim 4, and therefore is rejected under the same rationale.

16. With regard to Claim 11, Claim 11 is similar in scope to Claim 5, and therefore is rejected under the same rationale.

17. With regard to Claim 12, Claim 12 is similar in scope to Claim 6, and therefore is rejected under the same rationale.

18. With regard to Claim 13, Claim 13 is similar in scope to Claim 7, and therefore is rejected under the same rationale.

19. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Banks (US005796376A) in view of Lavelle (US004642794A), further in view of Trevers (US 20030206228A1).

Claim 8 is similar in scope to Claim 2, and therefore is rejected under the same rationale.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joni Hsu whose telephone number is 571-272-7785. The examiner can normally be reached on M-F 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew C. Bella can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JH



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